

IN THE CLAIMS:

1-17. (Canceled)

18. (Previously presented) A method of producing and treating a sheet suited to be used as a component or as a part of a component in a fuel assembly for a nuclear light water reactor, which method comprises the following steps:

- a) producing a sheet of a Zr-based alloy by forging, hot rolling and cold rolling in a suitable number of steps, wherein said alloy contains at least about 96 weight percent Zr;
- b) carrying out one of an $\alpha+\beta$ quenching and a β quenching of the sheet when the sheet has been produced to a thickness which is equal to the final thickness, and approximately equal to the final thickness, of the finished sheet;
- c) heat treating of the sheet in the α -phase temperature range of said alloy, wherein step c) is carried out after steps a) and b) have been carried out, and wherein
 - the sheet is stretched during the heat treatment according to step c);
 - wherein said stretching is carried out such that the sheet directly after having gone through the stretching has a remaining elongation compared to the state of the sheet immediately before the stretching; and
 - wherein said remaining elongation is between about 0.1% and about 7%.

19. (Previously presented) A method according to claim 18, wherein step b) is a β quenching.

20. (Previously presented) A method according to claim 18, wherein said stretching is carried out at a temperature of at most the temperature which constitutes the highest temperature in the α -phase temperature range of the alloy and at least at the temperature which is about 70% of said highest temperature in °K.

21. (Previously presented) A method according to claim 20, wherein about said stretching is carried out at a temperature which is between about 80% and about 98% of said highest temperature in °K.

22. (Cancelled)

23. (Previously presented) A method according to claim 18, wherein said stretching is carried out such that said elongation is longer than a critical degree of deformation of the alloy.

24-25. (Cancelled)

26. (Previously presented) A method according to claim 18, wherein said component defines a longitudinal direction which, when the component is used in said fuel assembly, is at least substantially parallel to a longitudinal direction of the fuel assembly and wherein said stretching of the sheet is carried out in a direction which corresponds to the longitudinal direction of said component for which the sheet is intended.

27-30. (Cancelled)

31. (New) A method of producing and treating a sheet suited to be used as a component or as a part of a component in a fuel assembly for a nuclear light water reactor, which method comprises the following steps:

- a) producing a sheet of a Zr-based alloy by forging, hot rolling and cold rolling in a suitable number of steps, wherein said alloy contains at least about 96 weight percent Zr;
- d) carrying out one of an $\alpha+\beta$ quenching and a β quenching of the sheet when the sheet has been produced to a thickness which is equal to the final thickness, and approximately equal to the final thickness, of the finished sheet;
- e) heat treating of the sheet in the α -phase temperature range of said alloy, wherein step c) is carried out after steps a) and b) have been carried out, and wherein
 - the sheet is stretched during the heat treatment according to step c);
 - wherein said stretching is carried out such that the sheet directly after having gone through the stretching has a remaining elongation compared to the state of the sheet immediately before the stretching; and
 - wherein said remaining elongation is between about 0.2% and about 4%.